

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 6, 7 and 9 in accordance with the following:

Claim 1 (Currently Amended): A data storage medium, comprising:
audio/visual (AV) data; and
mark-up documents to reproduce the AV data in an interactive mode, and contain interactive content to be displayed on an interactive screen with the AV data on an AV screen embedded in the interactive screen, when the data storage medium is inserted into a reproduction apparatus,
wherein among the mark-up documents, a start-up document comprises information about the mark-up documents to be displayed according to a set parental level to control access to the interactive content.

Claim 2 (Original): The data storage medium of claim 1, wherein the information of the start-up document comprises meta-information of a parental level, where the set parental level and link information on one of the mark-up documents correspond to the parental level in the meta-information.

Claim 3 (Original): The data storage medium of claim 2, where the link information comprises information of one of the mark-up documents to be displayed when the set parental level is higher than the parental level in the meta-information and information of one of the mark-up documents to be displayed when the set parental level is less than the parental level in the meta-information.

Claim 4 (Original): The data storage medium of claim 1, wherein the information of the start-up document is link information indicating a path of one of the mark-up

documents corresponding to the set parental level.

Claim 5 (Canceled):

Claim 6 (Currently Amended): A data storage medium, comprising:

audio/visual (AV) data;

mark-up documents to reproduce the AV data in an interactive mode, and contain interactive content to be displayed on an interactive screen with the AV data on an AV screen embedded in the interactive screen, when the data storage medium is inserted into a reproduction apparatus;

a video directory of AV data; and

an interactive directory of the mark-up documents to reproduce the AV data in an interactive mode,

wherein the interactive directory comprises sub-directories corresponding to two different parental levels set to control access to the interactive content, and in each of the sub-directories, the mark-up documents corresponding to a parental level are stored.

Claim 7 (Currently Amended): A data storage medium, comprising:

audio/visual (AV) data;

mark-up documents to reproduce the AV data in an interactive mode, and contain interactive content to be displayed on an interactive screen with the AV data on an AV screen embedded in the interactive screen, when the data storage medium is inserted into a reproduction apparatus;

a video directory of AV data; and

an interactive directory of mark-up documents, including a start-up document to control access to the interactive content,

wherein the interactive directory comprises sub-directories corresponding to two different parental levels, where in each of the sub-directories, the mark-up documents corresponding to a parental level are stored, and

wherein the start-up document further comprises link information of the mark-up documents stored in each of the sub-directories.

Claim 8 (Original): The data storage medium of claim 7, wherein the link information is written using a link tag.

Claim 9 (Currently Amended): A data storage medium, comprising:
audio/visual (AV) data;
mark-up documents to reproduce the AV data in an interactive mode, and contain interactive content to be displayed on an interactive screen with the AV data on an AV screen embedded in the interactive screen, when the data storage medium is inserted into a reproduction apparatus; and
display rule information to display the mark-up document to correspond to a set parental level.

Claim 10 (Original): The data storage medium of claim 9, wherein the display rule information comprises information indicating whether to display elements of the mark-up document corresponding to at least two different parental levels.

Claim 11 (Original): The data storage medium of claim 9, wherein the display rule information is written according to cascading style sheet (CSS) rules.

Claim 12 (Original): The data storage medium of claim 9, wherein a class value is allotted to one of the elements of the mark-up document, and the display rule information comprises information indicating whether to display an element to which the class value is allotted.

Claim 13 (Original): The data storage medium of claim 12, wherein the display rule information is written in the form of a CSS file.

Claim 14 (Previously Presented): The data storage medium of claim 1, wherein the AV data is DVD-video data, the mark-up documents are documents written in a mark-up language and/or to which source codes written in Javascript or Java language are linked or inserted thereto, and the parental level meets DVD-video standards.

Claims 15-16 (Withdrawn):

Claim 17 (Previously Presented): A method to reproduce data recorded on a data storage medium using a reproduction apparatus in an interactive mode, the method comprising:

- reading data recorded on the data storage medium in an interactive mode, including a mark-up document and audio/visual (AV) data that is linked and embedded in the mark-up document;
- identifying a set parental level; and
- reproducing the AV data in the interactive mode using a mark-up document corresponding to the identified parental level.

Claim 18 (Previously Presented): The method of claim 17, wherein comprises:

- identifying the parental level in meta-information written in a mark-up document designated as a start-up document; and
- reproducing the AV data using the mark-up document selected based upon a result of comparing the parental level identified in the meta-information with the parental level identified in as the set parental level.

Claim 19 (Original): The method of claim 17, wherein the AV data is reproduced in the interactive mode using the mark-up document presenting a warning message indicating that interactive content cannot be displayed when the parental level in the meta-information is lower than the set parental level.

Claim 20 (Previously Presented): A method to reproduce data recorded on a data storage medium using a reproduction apparatus in an interactive mode, the method comprising:

- reading data recorded on the data storage medium in an interactive mode, including an interactive directory of mark-up documents and audio/visual (AV) data that are linked and embedded in the mark-up documents;
- identifying a set parental level;
- reading a mark-up document in a sub-directory corresponding to the set parental level among sub-directories of the interactive directory; and
- reproducing the AV data using the read mark-up document.

Claim 21 (Canceled):

Claim 22 (Previously Presented): A method to reproduce data recorded on a data storage medium using a reproduction apparatus in an interactive mode, the method comprising:

- reading data recorded on the data storage medium in an interactive mode, including a mark-up document and audio/visual (AV) data that is linked and embedded in the mark-up document;
- identifying a class value of an element of a mark-up document;
- determining whether to display the element depending on the class value and display rule information; and
- embedding an AV screen obtained by reproducing the AV data in a mark-up screen obtained as a result of the determination and displaying the result of the embedment.

Claims 23-24 (Canceled):

Claim 25 (Previously Presented): An apparatus to reproduce data recorded on a data storage medium in an interactive mode using a mark-up document, comprising:

- a reader arranged to read the mark-up document and AV data from the data storage medium;
- an AV decoder arranged to decode the AV data;
- a presentation engine arranged to identify a predetermined value of an element of the mark-up document and determine whether to display the element depending on the predetermined value and to display rule information; and
- a blender arranged to blend a mark-up document interpreted by the presentation engine and an AV screen obtained by reproducing the AV data.

Claim 26 (Original): The apparatus of claim 25, wherein the display rule information is written according to CSS rules.

Claim 27 (Original): The apparatus of claim 26, wherein the display rule information is written in a form of a CSS file.

Claims 28-33 (Cancelled):

Claim 34 (Previously Presented): An apparatus to reproduce data from a data storage medium, comprising:

a reader arranged to read data from the data storage medium in an interactive mode, including mark-up documents and audio/visual (AV) data that are linked and embedded in the mark-up documents; and

a controller configured to control the reader to read AV data and a mark-up document from the data storage medium, wherein, in an interactive mode, the controller interprets the mark-up document corresponding to a parental level set by a user indicative of whether to reproduce the AV data recorded on the data storage medium.

Claim 35 (Previously Presented): The apparatus of claim 34, further comprising:
an AV decoder for decoding the AV data; and
a blender for blending the mark-up document and an AV screen obtained by reproducing the AV data.

Claim 36 (Previously Presented): The apparatus of claim 34, further comprising:
a display window; and
a blender for blending the AV data with the mark-up document so that the AV data is displayed in the display window defined by the mark-up document and an AV screen is embedded in the mark-up document screen.

Claim 37 (Original): The apparatus of claim 34, wherein the presentation engine comprises plugs-in.

Claim 38 (Original): The apparatus of claim 34, wherein the controller retrieves data and the mark-up document through a network.

Claim 39 (Original): The apparatus of claim 34, wherein the parental level has five different parental levels comprising G, PG, PG13, R, and NC-17 defined by data storage medium-video standards for compatibility.

Claim 40 (Original): The apparatus of claim 34, wherein the mark-up documents reproduce the AV data recorded on the data storage medium according to data storage medium-video standards in the interactive mode, and the mark-up documents are provided according to parental levels for compatibility.

Claim 41 (Original): The apparatus of claim 34, wherein the presentation engine uses an application program interface (API) to identify the parental level set for the apparatus.

Claim 42 (Original): The apparatus of claim 34, wherein the parental level information is a parental level written in a start-up document, where the start-up document comprises meta-information on the parental level, a set parental level, and link information of the mark-up document corresponding to the parental level in the meta-information.

Claim 43 (Original): The apparatus of claim 42, wherein the link information is the mark-up document information indicating whether the parental level set by the user is higher or lower than the parental level written in the start-up document.

Claim 44 (Original): The apparatus of claim 34, wherein the controller identifies the parental level set in the apparatus to reproduce the data using an application program interface (API) and interprets the mark-up document using meta-information and link information written in a mark-up document designated as a start-up document.

Claim 45 (Original): The apparatus of claim 34, wherein the data storage medium comprises a root directory having a video directory where the AV data is stored and an interactive directory where the mark-up document to support the interactive mode.

Claim 46 (Original): The apparatus of claim 34, wherein the link information comprises mark-up document information indicating the parental level set by the user for the apparatus to reproduce the data.

Claim 47 (Original): The apparatus of claim 34, wherein the mark-up document comprises the CSS file.

Claim 48 (Original): The apparatus of claim 48, wherein the CSS file is generated separately from the mark-up document.

Claim 49 (Original): The apparatus of claim 34, wherein the mark-up document is written using a script language to represent a document appropriate for the parental level.

Claim 50 (Previously Presented): A method to reproduce data recorded on a data storage medium using a reproduction apparatus in an interactive mode, comprising:

- selecting the interactive mode;

- reading data recorded on the data storage medium in the interactive mode, including mark-up documents and audio/visual (AV) data that are linked and embedded in the mark-up documents;

- identifying a parental level set by a user;

- identifying the parental level written in a mark-up document designated as a start-up document;

- comparing the parental level recorded in the mark-up document with the parental level set by the user;

- reproducing the AV data in the interactive mode using the mark-up document with a warning message indicating that the interactive content corresponding to the AV data cannot be displayed when the parental level written in the start-up document is less than the parental level set by the user; and

- reproducing the AV data in the interactive mode using the mark-up document comprising the interactive content to the AV data when the parental level written in the start-up document is higher than the parental level set by the user.

Claim 51 (Previously Presented): A method to display a mark-up document, comprising:

- reading data recorded on a data storage medium in an interactive mode, including a

mark-up document and audio/visual (AV) data that is linked and embedded in the mark-up document;

- identifying a parental level set by a user;
- identifying a class value allotted to a predetermined element of the mark-up document;
- determining whether to display the predetermined element based upon the parental level identified and the class value allotted to the predetermined element; and
- displaying the predetermined element.

Claim 52 (Previously Presented): A method to reproduce data recorded on a data storage medium using a reproduction apparatus in an interactive mode, comprising:

- reading data recorded on the data storage medium in the interactive mode, including a mark-up document and audio/visual (AV) data that is linked and embedded in the mark-up document;

- identifying a parental level set by a user;
- identifying a class value assigned to a predetermined element of the mark-up document;
- determining whether to display the predetermined element based upon the parental level identified and the class value and with reference to display rule information; and
- displaying an AV screen obtained by reproducing the AV data in the mark-up screen.